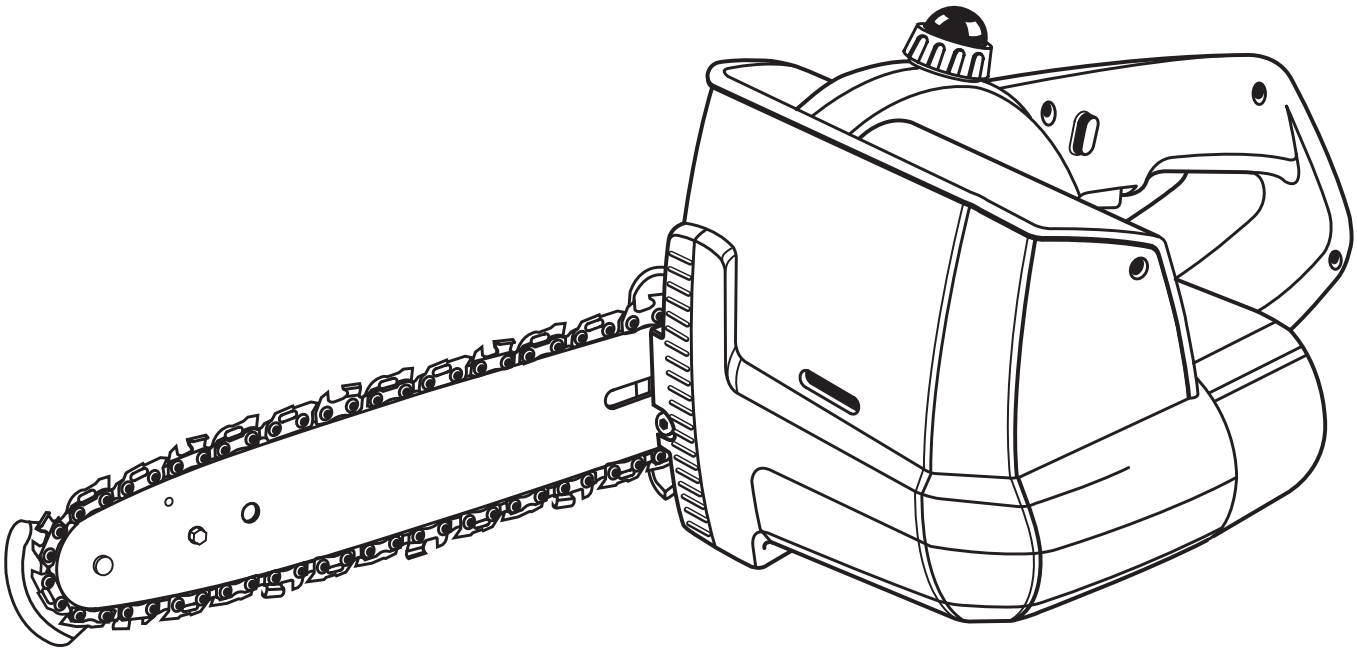
OPERATOR'S MANUAL
18 VOLT CORDLESS CHAIN SAW
MODEL NO. CS1800



Your new cordless chain saw has been engineered and manufactured to Ryobi's high standard for dependability, ease of operation, and operator safety. When properly cared for, the saw will give you years of rugged, trouble-free performance.

⚠ WARNING:
To reduce the risk of injury, the user must read and understand the operator's manual before using this product.

Thank you for buying a Ryobi product.

SAVE THIS MANUAL FOR FUTURE REFERENCE

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INTRODUCTION

Cutting wood is an easy task with the 18V chain saw. With the charger and removable battery pack, the chain saw can be charged and conveniently ready to use. Safety, performance, and dependability have been given top priority in the design of this chain saw making it easy to maintain and operate.

This saw was designed for occasional light duty use and has some limitations as to what can be cut with it. It was not designed for felling large trees or sawing of large logs.

Look for this symbol to point out important safety precautions. It means attention!!! Your safety is involved.

IMPORTANT SAFETY INSTRUCTIONS

⚠ WARNING:
Do not attempt to operate this unit until you have read thoroughly and understand completely all instructions, safety information, etc. contained in this manual. Failure to comply can result in accidents involving fire, electric shock, or serious personal injury.

READ ALL INSTRUCTIONS

BASIC SAFETY PRECAUTIONS

- Do not operate a chain saw with one hand! Use a firm grip with thumbs and fingers encircling the chain saw handles. Serious injury to the operator, helpers, bystanders, or any combination of these persons may result from one-handed operation. A chain saw is intended for two-handed use.
- Always be aware of what you are doing when using the chain saw. Use common sense. Do not operate the chain saw when you are tired, ill, or under the influence of alcohol, drugs, or medication.
- Stay alert and pay attention to what you are doing. Use common sense when using this unit.
- Keep all parts of your body away from the saw chain when the unit is running.
- Always carry the chain saw by the front handle with the unit stopped and the guide bar and saw chain positioned to the rear. When transporting your chain saw, use the appropriate guide bar scabbard.
- Never let anyone use your chain saw who has not received adequate instructions in its proper use. This applies to rentals as well as privately owned saws.
- Before you start the unit, make sure the saw chain is not contacting any object.
- Stop the chain saw before setting it down. Do not leave the unit running unattended.
- To avoid accidental starting, never carry the unit with your finger on the trigger.
- Maintain the unit with care. Keep the cutting edge sharp and clean for best performance and to reduce the risk of injury. Follow instructions for lubricating and changing accessories. Inspect the battery charger cord periodically, and if damaged, have it replaced or repaired by an authorized service dealer.
- Keep handles dry, clean, and free of oil and grease.
- Do not operate a chain saw that is damaged, improperly adjusted, or not completely and securely assembled. Chain should stop turning when the trigger is released. If the chain turns after the trigger has been released, have the unit serviced by your nearest Ryobi service dealer.
- Check for damaged parts. Any part or guard that has been damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service dealer unless otherwise indicated elsewhere in this manual.
- All chain saw service, other than the items listed in the operation and maintenance sections, should be performed by your nearest Ryobi service dealer.
- Do not use in the rain, snow or wet conditions.
- Always maintain a proper stance.
- Do not adapt your powerhead to a bow guide or use it to power any attachments or devices not listed for your saw.
- Do not cut vines and/or small underbrush.

SAFETY APPAREL

- Wear snug fitting clothing. Always wear heavy, long pants, overalls, jeans or chaps made of cut resistant material or ones that contain cut resistant inserts. Wear non-slip safety footwear. Wear non-slip heavy duty gloves to improve your grip and to protect your hands. Do not wear jewelry, short pants, sandals, or go barefoot. Do not wear loose fitting clothing, which could be drawn into the motor or catch the chain or underbrush. Secure hair so it is above shoulder level.
- Wear eye protection which is marked to comply with ANSI Z87.1 as well as hearing and head protection when operating this equipment.

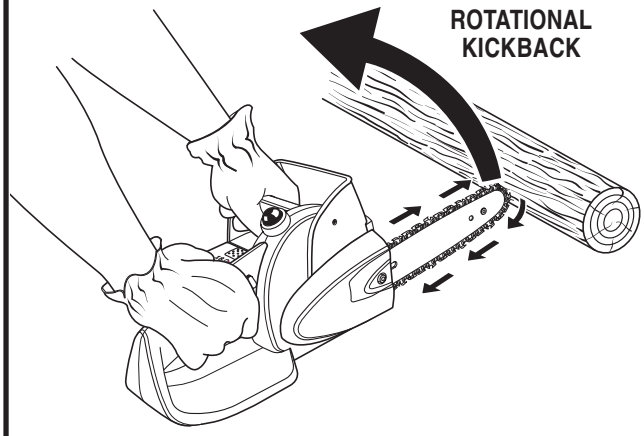
IMPORTANT SAFETY INSTRUCTIONS

KICKBACK

See Figures 1 and 2.

- WARNING: Kickback may occur when the moving chain contacts an object at the upper portion of the tip of the guide bar or when the wood closes in and pinches the saw chain in the cut. Contact at the upper portion of the tip of the guide bar can cause the chain to dig into the object and stop the chain for an instant. The result is a lightning fast, reverse reaction which kicks the guide bar up and back toward the operator. If the saw chain is pinched along the top of the guide bar, the guide bar can be driven rapidly back toward the operator. Either of these reactions can cause loss of saw control which can result in serious injury. Do not rely exclusively upon the safety devices built into your saw. As a chain saw user, you should take several steps to keep your cutting jobs free from accident or injury.
- **The following precautions should be followed to minimize kickback:**
  1. Always grip the saw firmly with both hands. Hold the saw firmly with both hands when the unit is running. Place your right hand on the rear handle and the left hand on the front handle with your thumbs and fingers encircling the chain saw handles. A firm grip together with a stiff left arm will help you maintain control of the saw if kickback occurs.
  2. Make sure that the area in which you are cutting is free from obstructions. Do not let the nose of the guide bar contact a log, branch, fence, or any other obstruction that could be hit while you are operating the saw.
  3. Always cut with the unit running at full speed. Fully squeeze the throttle trigger and maintain a steady cutting speed.
  4. Use replacement parts such as low kickback chain, SAFE-T-TIP anti-kickback nose guards, chain brakes and special guide bars that reduce the risks associated with rotational kickback.

     Use only the replacement guide bars and low kickback chains specified by the manufacturer for your saw.
- With a basic understanding of kickback, you can reduce or eliminate the element of surprise. Sudden surprise contributes to accidents.
- Keep proper footing and balance at all times.
- Do not cut above shoulder height or overreach when cutting.
- Keep the SAFE-T-TIP anti-kickback nose guard properly mounted on the guide bar to prevent rotational kickback.
- Follow the sharpening and maintenance instructions for the saw chain.



BAR SHOWN WITHOUT SAFE-T-TIP® NOSE GUARD FOR ILLUSTRATION PURPOSES ONLY.

Fig. 1

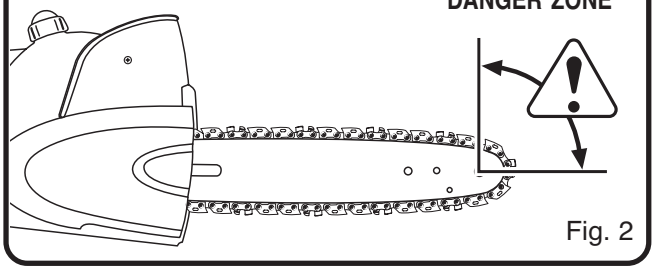


Fig. 2

- Push and Pull - This reaction force is always opposite to the direction the chain is moving where wood contact is made. Thus, the operator must be ready to control the PULL when cutting on the bottom edge of the bar, and PUSH when cutting along the top edge. *See Figure 3.*

IN THE CUTTING/WORK AREA

- Do not operate a chain saw in a tree, on a ladder, or scaffold; this is extremely dangerous.
- Keep ALL children, bystanders, visitors, and animals out of the work area while starting or cutting with the chain saw.

  NOTE: The size of the work area depends on the job being performed as well as the size tree or work piece involved. For example, felling a tree requires a larger work area than making bucking cuts.
- Never start cutting until you have a clear work area, secure footing, and a planned retreat path from the falling tree. Cluttered area invite injuries.
- Do not expose the chain saw to rain.
- Do not use the chain saw in damp or wet locations.
- Do not use the chain saw near flammable liquids, gases, or in any type of explosive atmosphere.
- Use extreme caution when cutting small size brush and saplings, because slender material may catch the saw chain and be whipped toward you or pull you off balance.
- When cutting a limb that is under tension, be alert for spring back so that you will not be struck when the tension in the wood fibers is released.
- Do not force the chain saw. The job can be performed better and safer at the rate for which it was intended.
- Always use the right product for your application. The chain saw should be used for cutting wood only. Never use the chain saw to cut plastic, masonry or non-wood building materials.
- Do not use the chain saw for purposes not intended.
- Store idle chain saw when not in use, chain saw should be stored in a dry and high or locked area out of the reach of children. When storing chain saw, remove battery and place the scabbard on the bar and chain or store the chain saw in a carry case.
- Remove the battery pack from the chain saw before cleaning, servicing, storing, removing material from the unit, changing accessories such as the bar and chain, or when not in use.

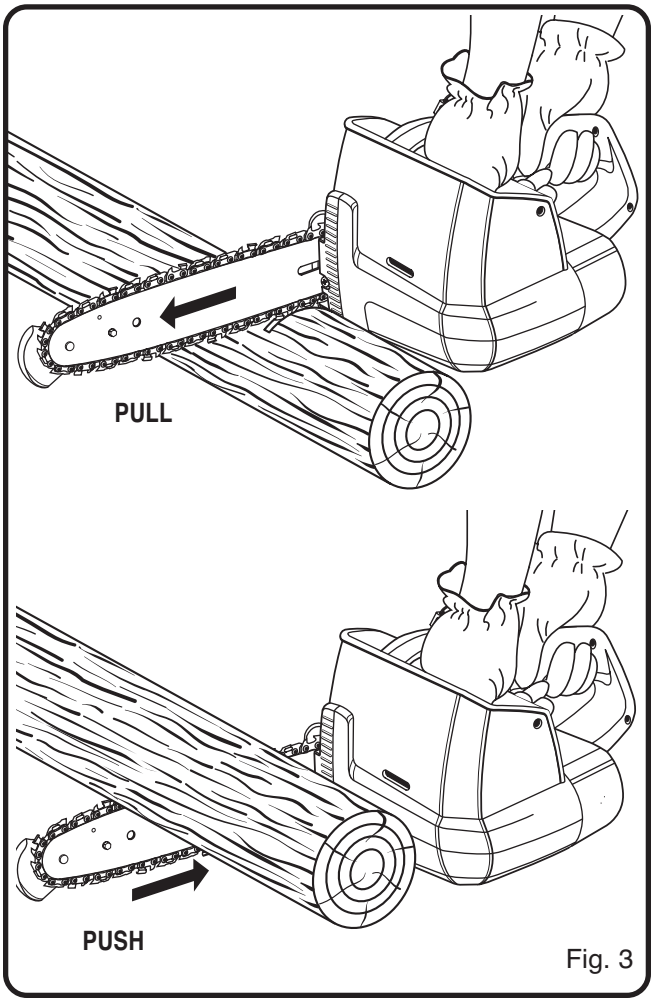


Fig. 3

IMPORTANT SAFETY INSTRUCTIONS

UNDERSTANDING YOUR CHAIN SAW SAFETY DEVICES

See Figure 4.

SAFE-T-TIP® Anti-Kickback Nose Guard

The SAFE-T-TIP® prevents kickback from happening, because it covers the tip of the bar where kickback is generated. Never attempt any kind of cutting where the SAFE-T-TIP® would have to be removed from the bar tip.

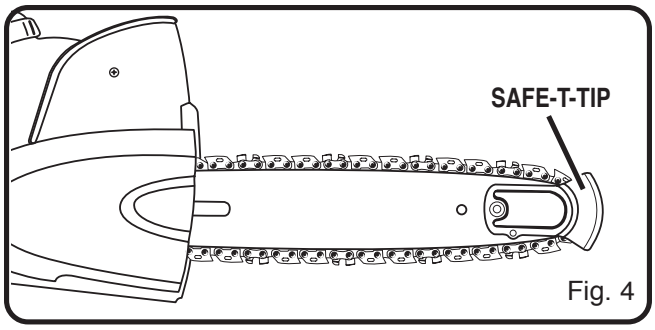


Fig. 4

LOW KICKBACK SAW CHAIN

The rakers (depth gauges) ahead of each cutter can minimize the force of a kickback reaction by preventing the cutters from digging in too deeply at the kickback zone. Only use replacement chain that is equivalent to original chain or has been certified as low kickback chain per ANSI B175.1.

Low kickback saw chain is chain that has met the kickback performance requirements of ANSI B175.1 - 1991 (American National Standard for Power Tools - Gasoline-Powered Chain Saws-Safety Requirements) when tested on the representative sample of chain saws below 3.8 c.i.d. specified in ANSI B175.1 - 1991.

As saw chains are sharpened during their useful life, they lose some of the low kickback qualities and extra caution should be used.

GUIDE BARS

Generally, guide bars with small radius tips have somewhat lower kickback potentials.

When making a replacement, be sure to order one of the Ryobi bars listed for your saw in this operator's manual. The proper size SAFE-T-TIP® nose guard comes installed on the bar. Use only guide bars that have a provision for mounting the SAFE-T-TIP®.

BATTERY SAFETY

- Battery operated units do not have to be plugged into an electrical outlet; therefore, they are always in operating condition. Be aware of possible hazards even when unit is not operating.
- Remove the battery pack from the chain saw before cleaning, servicing, storing, removing material from the unit, changing accessories such as the bar and chain, or when not in use.
- A battery pack must be recharged only with the specified charger for the battery pack. A charger that may be suitable for one type of battery pack may create a risk of fire when used with another battery pack. Use battery pack only with charger listed.

BATTERY PACK:	**Item # 1322401, 1323303, 130224007, or 130256001**
CHARGER:	**Item # 1423701**

- To reduce the risk of explosion and possible injury, Do not place battery units or their batteries near fire or heat.
- Do not open or mutilate the battery pack. Released electrolyte is corrosive and may cause damage to the eyes or skin. It may be toxic if swallowed.
- A damaged battery pack is subject to explosion. To avoid serious personal injury, properly dispose of a damaged battery pack.
- Batteries vent hydrogen gas and can explode in the presence of a source of ignition, such as a pilot light. To reduce the risk of serious personal injury, never use any cordless product in the presence of open flame. An exploded battery pack can propel debris and chemicals. If exposed, flush with water immediately.
- Do not charge unit in a damp or wet location. Following this rule will reduce the risk of electric shock.
- For best results, your battery unit should be charged in a location where the temperature is more than 50°F (10°C) but less than 100°F (38°C). Do not store outside or in vehicles.
- Under extreme usage or temperature conditions, battery pack leakage may occur. If liquid comes in contact with your skin, wash immediately with soap and water, then neutralize with lemon juice or vinegar. If liquid gets into your eyes, flush them with clean water for at least 10 minutes, then seek immediate medical attention.

- Do not dispose of batteries in a fire. The cell may explode. Batteries should be recycled, consult your local waste authority for information regarding available recycling and/or disposal options.
- When battery pack is not in use, keep it away from other metal objects like: paper clips, coins, keys, nails, screws, or other small metal objects that can make a connection from one terminal to another. Shorting the battery pack terminals together may cause sparks, burns, or a fire.

CHARGER SAFETY

- Save these instructions. This manual contains important Rules for Safe Operation and operating instructions for charger.
- Before using battery charger, read all instructions and cautionary markings in this manual, on battery charger, and product using battery charger.
- To reduce risk of injury, charge only nickel-cadmium type rechargeable batteries. Other types of batteries may burst, causing personal injury and damage.
- Do not expose charger to wet or damp conditions.
- Use of an attachment not recommended or sold by the battery charger manufacturer may result in a risk of fire, electric shock, or injury to persons.
- To reduce risk of damage to charger body and cord, pull by charger plug rather than cord when disconnecting charger.
- Make sure cord is located so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress.
- An extension cord should not be used unless absolutely necessary. Use of improper extension cord could result in a risk of fire and electric shock. If extension cord must be used, make sure:
  a. That pins on plug of extension cord are the same number, size and shape as those of plug on charger.
  b. That extension cord is properly wired and in good electrical condition; and
  c. That wire size is large enough for AC ampere rating of charger as specified below:

Cord Length (Feet)	25'	50'	100'
Cord Size (AWG)	16	16	16

  NOTE: AWG = American Wire Gage
- Do not operate charger with a damaged cord or plug. If damaged, have replaced immediately by a qualified serviceman.
- Do not operate charger if it has received a sharp blow, been dropped, or otherwise damaged in any way; take it to a qualified serviceman.
- Do not disassemble charger; take it to a qualified serviceman when service or repair is required. Incorrect reassembly may result in a risk of electric shock or fire.
- To reduce risk of electric shock, unplug the charger from outlet before attempting any maintenance or cleaning. Turning off controls will not reduce this risk.
- Disconnect charger from power supply when not in use.
- Risk of electric shock. Do not touch uninsulated portion of output connector or uninsulated battery terminal.
- Save these instructions. Refer to them frequently and use them to instruct others who may use this unit. If you loan someone this unit, loan them these instructions also.

SAVE THESE INSTRUCTIONS

SYMBOLS

Important: Some of the following symbols may be used on your tool. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the tool better and safer.

SYMBOL	NAME	EXPLANATION
V	Volts	Voltage
A	Amperes	Current
Hz	Hertz	Frequency (cycles per second)
W	Watt	Power
min	Minutes	Time
~	Alternating Current	Type or a characteristic of current
⎓	Direct Current	Type or a characteristic of current
n_0	No Load Speed	Rotational speed, at no load
⧈	Class II Construction	Designates Double Insulated Construction tools
.../min	Revolutions or Reciprocation Per Minute	Revolutions, strokes, surface speed, orbits etc. per minute
	Safety Alert Symbol	Indicates danger, warning or caution. It means attention!!! Your safety is involved.
	Wet Conditions Alert	Do not expose to rain or use in damp locations.
	Read Your Operator's Manual	Your manual contains special messages to bring attention to potential safety concerns, machine damage as well as helpful operating and servicing information. Please read all the information carefully to avoid injury and machine damage.
	Wear Eye, Hearing, and Head Protection	Wear eye protection which is marked to comply with ANSI Z87.1 as well as hearing and head protection when operating this equipment.
	Wear Safety Footwear	Wear non-slip safety footwear when using this equipment.
	Wear Gloves	Wear non-slip, heavy-duty protective gloves when handling the pruner.
	Keep Children and Pets Away	Danger- Keep children and pets away.
	Beware of Kickback	DANGER! Beware of kickback.

SYMBOLS

Important: Some of the following symbols may be used on your tool. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the tool better and safer.

SYMBOL	NAME	EXPLANATION
	SAFE-T-TIP	The SAFE-T-TIP® nose guard on your bar nose prevents rotational kickback.
	Bar nose contact	Avoid bar nose contact.
	Holding saw	Hold saw properly with both hands.

⚠ WARNING:

The operation of any power tool can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning tool operation, always wear safety goggles or safety glasses with side shields and a full face shield when needed. We recommend Wide Vision Safety Mask for use over eyeglasses or standard safety glasses with side shields. Always wear eye protection which is marked to comply with ANSI Z87.1.

The purpose of safety symbols is to attract your attention to possible dangers. The safety symbols, and the explanations with them, deserve your careful attention and understanding. The safety warnings do not by themselves eliminate any danger. The instructions or warnings they give are not substitutes for proper accident prevention measures.

SYMBOL	MEANING
⚠	**DANGER:** Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
⚠	**WARNING:** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
⚠	**CAUTION:** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices that may cause property damage.
NOTE:	Advises you of information or instructions vital to the operation or maintenance of the equipment.

SAVE THESE INSTRUCTIONS

NOTE: Save these instructions. Refer to them frequently and use them to instruct others who may use this unit. If you loan someone this unit, loan them these instructions also.

SPECIFICATIONS

PRODUCT SPECIFICATIONS:

Motor	18 Volt, DC
Bar Length	10 in. (254 mm)
Replacement Bar Part No.	671256002 or 671667002
Replacement Chain Part No.	6958301 or 690583002
Net Weight	7.5 lbs. (3.4 kg.)
Charger Replacement Part Number	1423701
Battery Pack Replacement Part Number	1322401, 1323303, 130224007, or 130256001
Charger Rating	120V, 60 Hz, AC Only
Charger Voltage	18 Volt
Charger Rate	1 Hour

NOTE: This saw was designed for occasional light duty use and has some limitations as to what can be cut with it.

UNPACKING

This chain saw has been shipped completely assembled and ready for use. After removing it from the box, inspect it carefully to make sure no breakage or damage has occurred during shipping. If any parts are damaged or missing, contact your nearest Ryobi Authorized Service dealer to obtain replacement parts before attempting to operate the chain saw. The guide bar, chain, wrench, bar and chain oil, scabbard, battery pack, battery charger, and this operator's manual are also included.

APPLICATIONS

The chain saw can be used for the following applications only:

- Limbing and pruning branches from trees.
- Felling small trees up to 5 in. (127 mm) diameter.
- Bucking the fallen tree into shorter lengths.

FEATURES

KNOW YOUR CHAIN SAW

See Figure 1.

Before attempting to use the chain saw, familiarize yourself with all operating features and safety requirements.

⚠ WARNING:
Carefully read through this entire operator's manual before using your chain saw. Pay close attention to the Important Safety Instructions, Warnings and Cautions. If you use your chain saw properly and only for what it is intended, you will enjoy years of safe, reliable service.

⚠ WARNING:
If any parts are missing, do not operate your chain saw until the missing parts are replaced. Failure to do so could result in possible serious personal injury.

⚠ WARNING:
Do not allow familiarity with your chain saw to make you careless. Remember that a careless fraction of a second is sufficient to inflict severe injury.

FEATURES

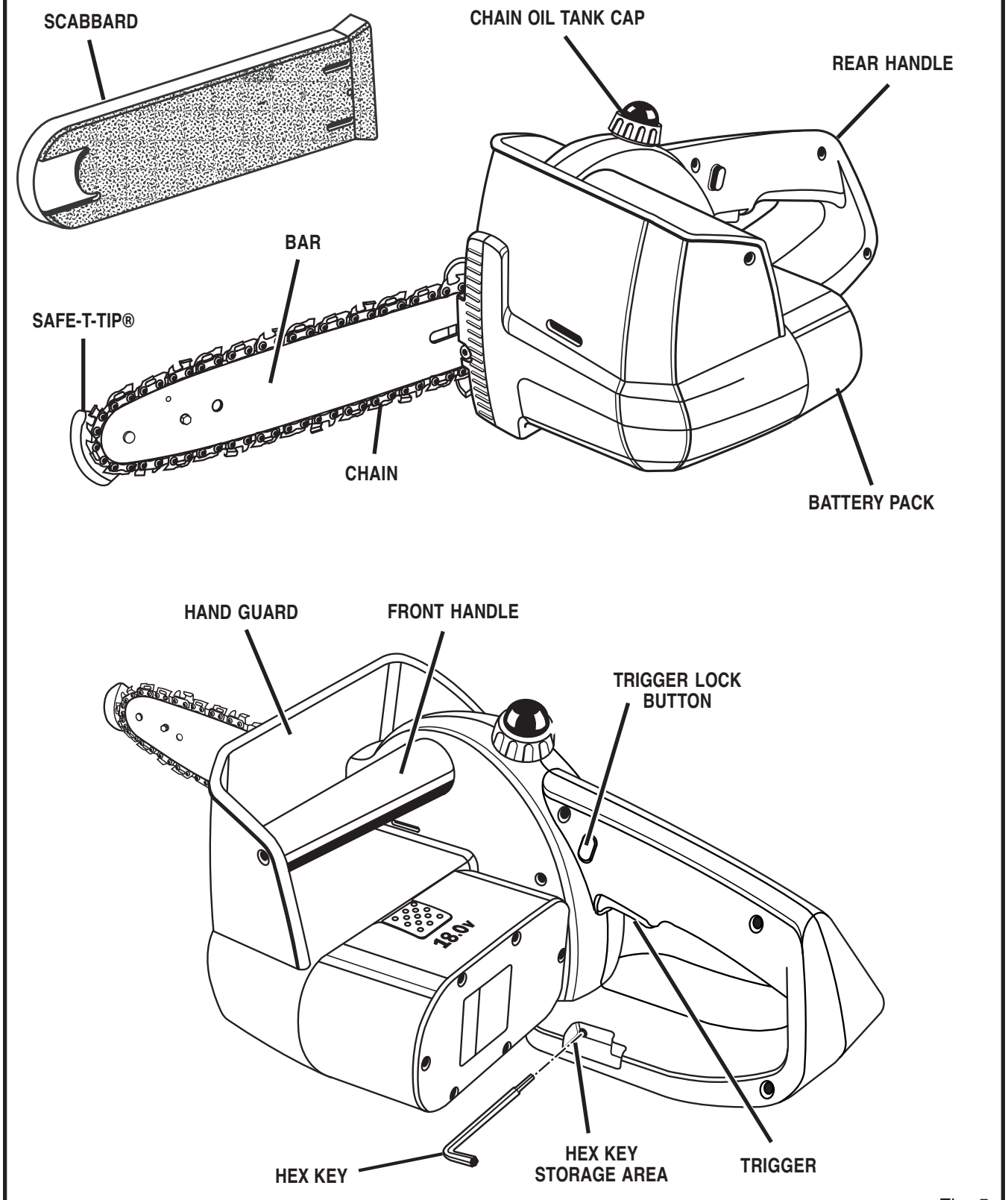


Fig. 5

GLOSSARY OF TERMS

Front Handle

The support handle located at or toward the front of the chain saw.

Front Handle Guard

A structural barrier between the front handle of a chain saw and the guide bar, typically located close to the hand position on the front handle and sometimes employed as an activating lever for a chain brake.

Guide Bar

A solid railed structure that supports and guides the saw chain.

Saw Chain

A loop of chain that has cutting teeth for cutting wood. It is driven by the motor and is supported by the guide bar.

Kickback

The backward and/or upward motion of the guide bar occurring when the moving chain contacts an object at the upper portion of the tip of the guide bar, or when the wood closes in and pinches the saw chain in the cut.

Kickback, Pinch

The rapid push back of the saw which can occur when the wood closed in and pinches the moving saw chain in the cut along the top of the guide bar.

Kickback, Rotational

The rapid upward and backward motion of the saw which can occur when the moving saw chain, near the upper portion of the top of the guide bar, contacts an object such as a log or branch.

Low-Kickback Chain

A chain that complies with the kickback performance requirements of ANSI B175-1-1991 when tested on a representative sample of chain saws.

Normal Cutting Position

Those positions assumed in performing the bucking and felling cuts.

Notching Undercut

A notch cut in a tree that directs the tree's fall.

Felling

The process of cutting down a tree.

Felling Back Cut

The final cut in a tree felling operation, made on the opposite side of the tree from the notching undercut.

Oiler Control

A system for oiling the guide bar and saw chain.

Rear Handle

The support handle located at or toward the rear of the saw.

Reduced Kickback Guide Bar

A guide bar which has been demonstrated to reduce kickback significantly.

Replacement Saw Chain

A chain that complies with the kickback performance requirements of ANSI B175.1-1991 when tested with specific chain saws. It may not meet the ANSI performance requirements when used with other saws.

Switch

A device that when operated will complete or interrupt an electrical power circuit to the motor of the chain saw.

Switch Lockout

A movable stop that prevents the unintentional operation of the switch until manually actuated.

Safe-T-Tip

An attachment that may be provided on the end of the guide bar to prevent the chain, on the end of the guide bar, from contacting the wood.

Drive Sprocket or Sprocket

The toothed part that drives the saw chain.

BATTERY PACK AND CHARGER

LED FUNCTION OF CHARGER

See Figure 6.

LED WILL BE ON TO INDICATE STATUS OF CHARGER AND BATTERY PACK:

- Red LED on = Fast charging mode.
- Green LED on = Fully charged battery pack.
- Yellow and Green LEDs on = Control charge or defective battery pack.
- No LED on = Defective charger or battery pack.

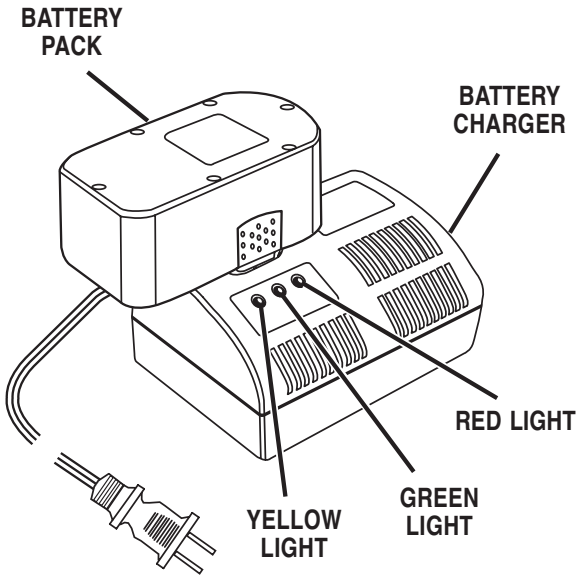
CHARGING YOUR CHAIN SAW

The battery pack for your chain saw has been shipped in a low charge condition to prevent possible problems. Therefore, you should charge it prior to use.

NOTE: Batteries will not reach full charge the first time they are charged. Allow several cycles (pruning followed by recharging) for them to fully charge.

TO CHARGE

- Charge battery pack only with the charger provided.
- **Make sure power supply is normal household voltage,** 120 volts, 60 Hz, AC only.
- Connect charger to power supply.
- Place battery pack in charger. *See Figure 3.* Align raised rib on battery pack with groove in charger.
- Press down on battery pack to be sure contacts on battery pack engage properly with contacts in charger. When properly connected, red light will turn on.
- Normally, the yellow and green lights on the charger will come on. This indicates charger is in control charge mode and should switch to fast charge mode within 5 minutes. When charger is in fast charge mode the red light will come on. If after a period of 15 minutes the yellow and green lights remain on, remove the battery pack, wait 1 minute and reinsert battery pack in charger. If the yellow and green lights continue to remain on an additional 15 minutes, the battery pack is damaged and will not accept charge.
- When your battery pack becomes fully charged, the red light will turn off and the green light will turn on.
- After normal usage, 1 hour of charge time is required to be fully charged. A minimum charge time of 1 to 1-1/2 hours is required to recharge a completely discharged tool.



- **RED LIGHT "ON" INDICATES FAST CHARGING MODE**
- **YELLOW AND GREEN LIGHTS "ON" INDICATES CONTROL CHARGE OR POSSIBLE FAULTY BATTERY**
- **GREEN LIGHT "ON" INDICATES FULLY CHARGED**

Fig. 6

- The battery pack will become slightly warm to the touch while charging. This is normal and does not indicate a problem.
- **DO NOT** place charger in an area of extreme heat or cold. It will work best at temperatures above 50°F and below 100°F.

IMPORTANT INFORMATION FOR RECHARGING HOT BATTERIES

When using your chain saw continuously, the batteries in your battery pack will become hot. You should let a hot battery pack cool down for approximately 30 minutes before attempting to recharge.

NOTE: This situation only occurs when continuous use of your chain saw causes the batteries to become hot. It does not occur under normal circumstances. Refer to "Charging Your Chain saw" earlier in this manual, for normal recharging of batteries. If the charger/charging assembly does not charge your battery pack under normal circumstances, return **both** the battery pack and charger/charging assembly to your nearest **Ryobi Authorized Service dealer** for electrical check.

TO INSTALL BATTERY PACK

See Figure 7.

1. Place the battery pack in your chain saw. Align raised rib on battery pack with groove in chain saw's battery port.
2. Make sure the latches on each side of the battery pack snap in place and that battery pack is secured in chain saw before beginning operation.

TO REMOVE BATTERY PACK

See Figure 7.

Locate latches on side of battery pack and depress both sides to release the battery pack from the chain saw.

⚠ CAUTION:

When placing battery pack in your chain saw, be sure raised rib on battery pack aligns with groove in chain saw's battery port and latches snap in place properly. Improper assembly of battery pack can cause damage to internal components.

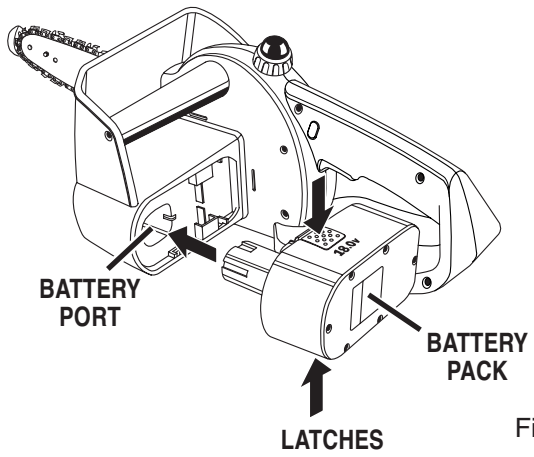


Fig. 7

⚠ CAUTION:

Remove battery pack from unit. Fill oil tank with Homelite Bar and Chain Oil before starting the chain saw. Failure to lubricate the chain will cause damage to the bar and chain.

CHAIN OIL SYSTEM

See Figure 8.

1. Use Homelite Bar and Chain Oil. It is formulated to perform over a wide temperature range with no dilution required.

   NOTE: Do not use dirty, used or otherwise contaminated oils. Damage may occur to the bar or chain.
2. Carefully pour the bar and chain oil into the tank.
3. Check and fill the oil tank when battery is recharged, or as needed.
4. Depress the oil tank cap several times to pump the oil to the chain before starting the saw.
5. Depress the oil tank cap every 20-30 seconds while cutting to keep the chain lubricated.

NOTE: It is normal for oil to seep from the saw when not in use. To prevent seepage, empty the oil tank after each use. When storing the unit for a long period of time (three months or longer) be sure the chain is lightly lubricated; this will prevent rust on the chain and bar sprocket.

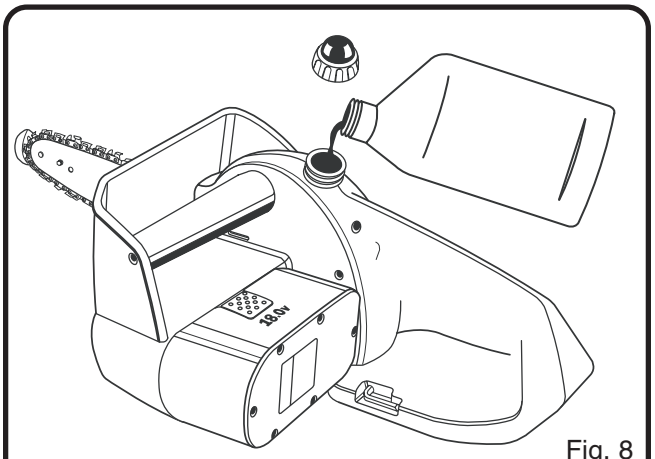


Fig. 8

STARTING AND STOPPING THE CHAIN SAW

See Figure 9.

⚠ WARNING:
Keep body to the left of the chain line. Never straddle the saw or chain, or lean over past the chain line.

STARTING THE CHAIN SAW

1. Place the chain saw on a flat bare surface and make sure no objects or obstructions are in immediate vicinity which could come in contact with the bar and chain.
2. Press and hold the trigger lock button. This makes the trigger operational.
3. Press and hold the trigger, release the trigger lock button and continue to squeeze the trigger for continued operation.

STOPPING THE CHAIN SAW

1. Release the trigger to stop the chain saw.
2. Upon release of the trigger, the trigger lock button will be automatically reset to the lock position.

This cordless chain saw is not designed for cutting trees larger than 5 in. (127 mm) in diameter.

This cordless chain saw is designed for limbing and pruning type cutting, as well as cutting trees up to 5 in. (127 mm) in diameter only.

Do not attempt to make any cut that would require removal of the SAFE-T-TIP.

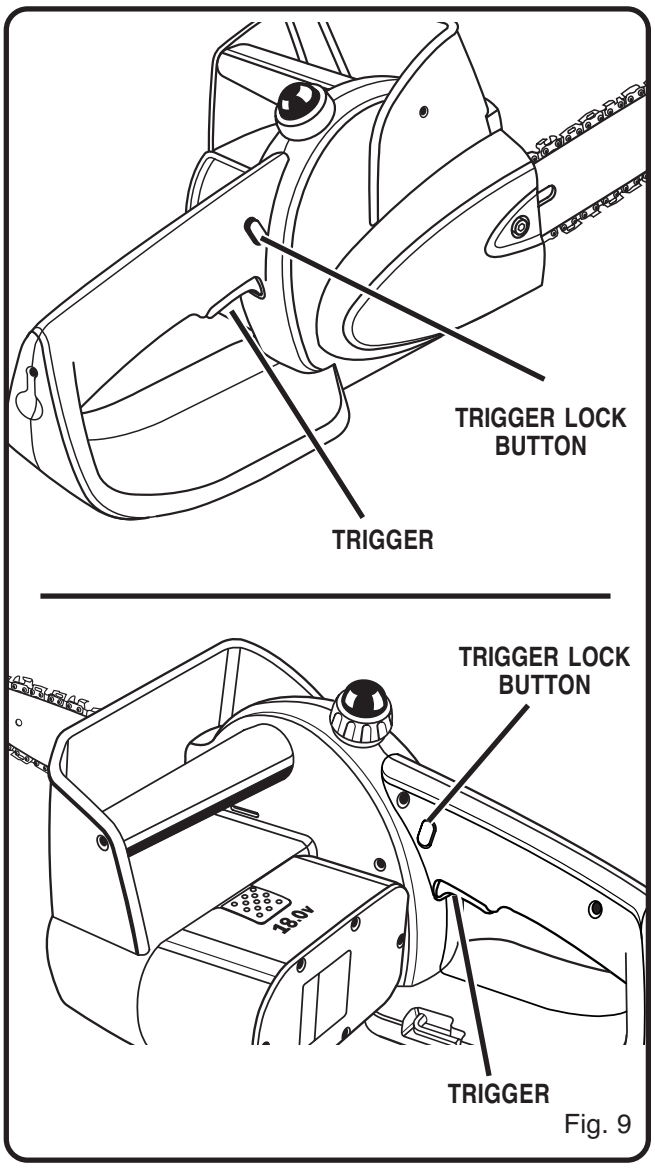


Fig. 9

PREPARATION FOR CUTTING

PROPER GRIP ON HANDLES

Figures 10, 11, and 12.

Refer to “Important Safety Instructions” earlier in this manual for appropriate safety equipment.

1. Wear non-slip gloves for maximum grip and protection.
2. Hold the saw firmly with both hands. Always keep your left hand on the front handle and your right hand on the rear handle so that your body is to the left of the chain line.

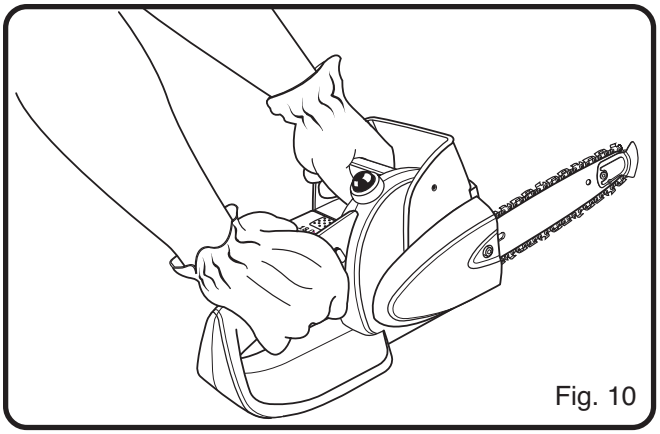


Fig. 10

⚠ WARNING:
Never use a left-handed (cross-handed) grip, or any stance which would place your body or arm across the chain line.

3. Maintain a proper grip on the saw whenever the unit is running. The fingers should encircle the handle and the thumb is wrapped under the handle-bar. This grip is least likely to be broken (by a kickback or other sudden reaction of the saw). Any grip in which the thumb and fingers are on the same side of the handle, is dangerous because a slight kick of the saw can cause loss of control.

⚠ WARNING:
Do not operate the throttle trigger with your left hand and hold the front handle with your right hand. Never allow any part of your body to be in the chain line while operating a saw.

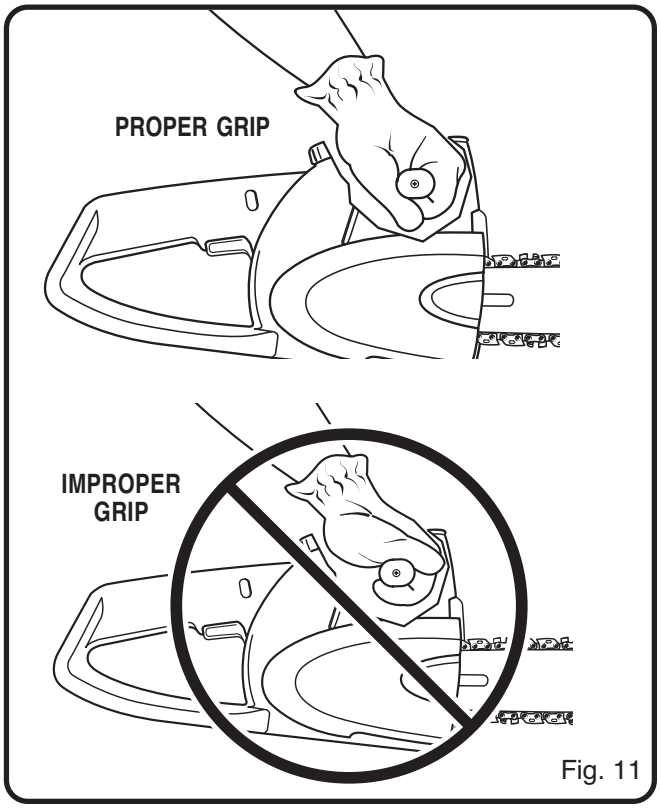


Fig. 11

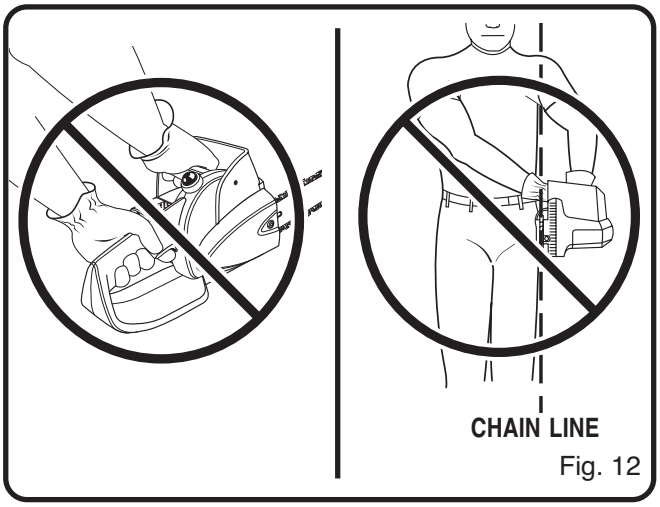


Fig. 12

PROPER CUTTING STANCE

See Figure 13.

- Weight should be balanced with both feet on solid ground.
- Keep left arm with elbow locked in a "straight arm" position to withstand any kickback force.
- Your body should always be to the left of the chain line.
- Thumb should be on underside of handlebar.

BASIC CUTTING PROCEDURE

Practice cutting a few small logs using the following technique to get the "feel" of using your saw before you begin a major sawing operation.

1. Take the proper stance in front of the wood with the saw off.
2. Squeeze the trigger and let the chain accelerate to full speed before entering the cut.
3. Begin cutting with the saw against the log.
4. Keep the unit running the entire time you are cutting, maintain a steady speed.
5. Allow the chain to cut for you; exert only light downward pressure. If you force the cut, damage to the bar, chain, or unit can result.
6. Release the trigger as soon as the cut is completed, allowing the chain to stop. If you run the saw without a cutting load, unnecessary wear can occur to the chain, bar, and unit.
7. Do not put pressure on the saw at the end of the cut.

WORK AREA PRECAUTIONS

- Cut only wood or materials made from wood; no sheet metal, no plastics, no masonry, no non-wood building materials.
- Never allow children to operate your saw. Allow no person to use this chain saw who has not read this Operator's Manual or received adequate instructions for the safe and proper use of this chain saw.
- When felling a tree, keep everyone - helpers, bystanders, children, and animals a safe distance from the cutting area. During felling operations, the safe distance should be a least twice the height of the largest trees in the felling area. During bucking operations, keep a minimum distance of 15 feet (4.5 m) between workers.Trees should not be felled in a manner that would endanger any person, strike any utility line or cause any property damage. If the tree does make contact with any utility line, the utility company should be notified immediately.

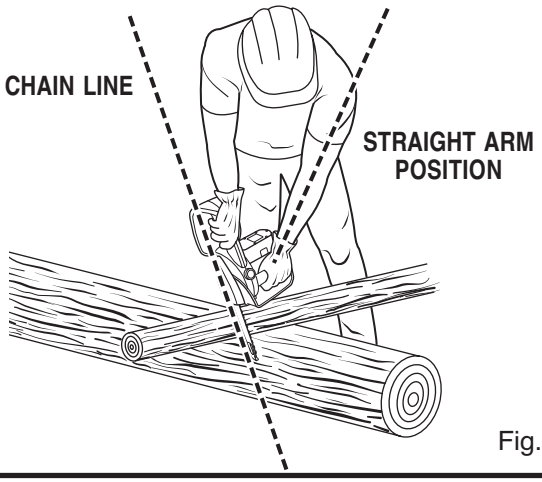


Fig. 13

- Always cut with both feet on solid ground to prevent being pulled off balance.
- Do not cut above chest height, as a saw held higher is difficult to control against kickback forces.
- Do not fell trees near electrical wires or buildings. Leave this operation for professionals.
- Cut only when visibility and light are adequate for you to see clearly.

TREE FELLING

Unusual Hazardous Tree Felling Conditions

Do not fell trees during periods of high wind or heavy precipitation. Wait to do your cutting until the hazard has ended.

⚠ WARNING:
Do not cut down trees having an extreme lean or large trees that have rotten limbs, loose bark, or hollow trunks. Have these trees pushed or dragged down with heavy equipment, then cut them up.

⚠ WARNING:
Do not cut trees near electrical wires or buildings.

⚠ WARNING:
Check the tree for damaged or dead branches that could fall and hit you during felling.

⚠ WARNING:
Periodically glance at the top of the tree during the backcut to assure the tree is going to fall in the desired direction.

⚠ WARNING:
If the tree starts to fall in the wrong direction, or if the saw gets caught or hung up during the fall, leave the saw and save yourself!

- Felling a tree - When bucking and felling operations are being performed by two or more persons, at the same time, the felling operation should be separated from the bucking operation by a distance of at least twice the height of the tree being felled. Trees should not be felled in a manner that would endanger any person, strike any utility line or cause any property damage. If the tree does make contact with any utility line, the utility company should be notified immediately.
- Before any cuts are started, pick your escape route (or routes in case the intended route is blocked); clear the immediate area around the tree and make sure there are no obstructions in your planned path of retreat. Clear path of safe retreat approximately 135° from planned line of fall. The retreat path should extend back and diagonally to the rear of the expected line of fall. *See Figure 14.*
- Before felling is started consider the force and direction of the wind, the lean and balance of the tree, and the location of large limbs. These things influence the direction in which the tree will fall. Do not try to fell a tree along a line different from its natural line of fall.
- The chain saw operator should keep on the uphill side of the terrain as the tree is likely to roll or slide downhill after it is felled.
- Remove dirt, stones, loose bark, nails, staples, and wire from the tree where felling cuts are to be made.
- **Notched Undercut.** Cut a notch about 1/3 the diameter of the tree, perpendicular to the direction of fall. Make the cuts of the notch so they intersect at a right angle to the line of fall. This notch should be cleaned out to leave a straight line. To keep the weight of the wood off the saw, always make the lower cut of the notch before the upper cut. *See Figure 15.*

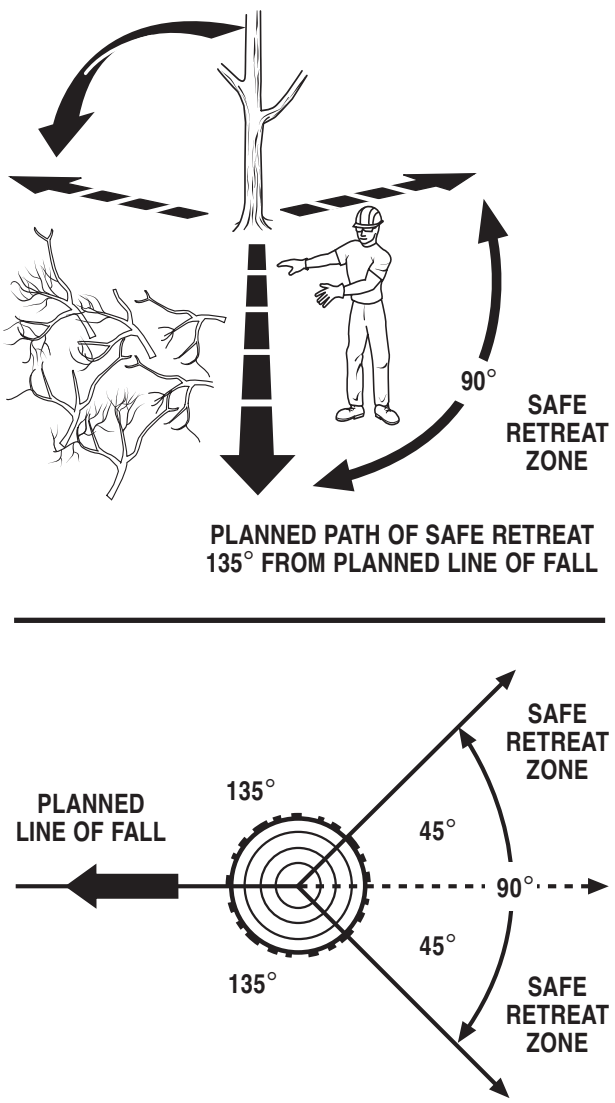


Fig. 14

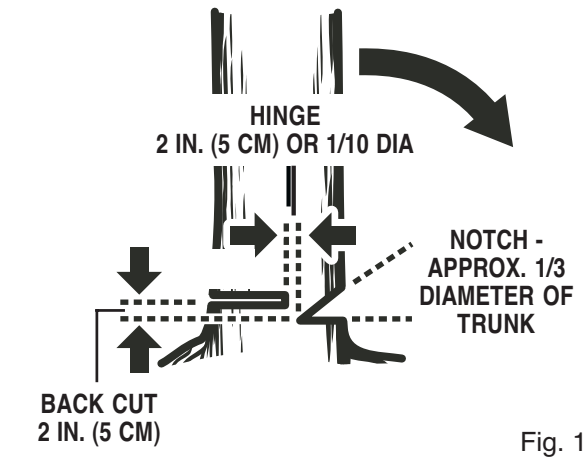


Fig. 15

- **Felling Backcut.** The backcut is always made level and horizontal, and at a minimum of 2 inches (5 cm) above the horizontal cut of the notch. *See Figures 15 and 16.*
- Never cut through to the notch. Always leave a band of wood between the notch and backcut (approximately 2 inches (5 cm) or 1/10 the diameter of the tree). This is called "hinge" or “hingewood.” It controls the fall of the tree and prevents slipping or twisting or shoot-back of the tree off the stump. *See Figures 15 and 16.*
- On large diameter trees, stop the back cut before it is deep enough for the tree to either fall or settle back on the stump. Then insert soft wooden or plastic wedges into the cut so they do not touch the chain. The wedges can be driven in, little by little, to help jack the tree over. *See Figure 17.*

  NOTE: When bucking or felling with a wedge, it may be necessary to remove the SAFE-T-TIP® anti-kickback device to allow the bar to be drawn through the cut. After the cut is complete, the tip should be reinstalled immediately.
- As tree starts to fall, stop the chain saw and put it down immediately. Retreat along the cleared path, but watch the action in case something falls your way. Be alert for overhead limbs or branches that may fall and watch your footing.

⚠ WARNING:
Never cut through to the notch when making a backcut. The hinge controls the fall of the tree, this is the section of wood between the notch and backcut.

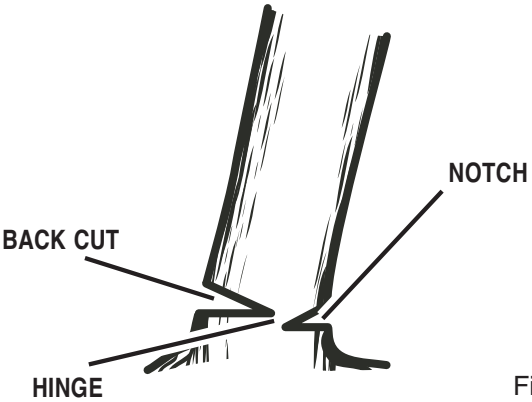


Fig. 16

Fig. 17

BUCKING

See Figures 18 through 21.

Bucking is the term used for cutting a fallen tree to the desired log length.

- Always make sure your footing is secure and your weight is distributed evenly on both feet.
- Cut only one log at a time.
- Support small logs on a saw horse or another log while bucking.
- Keep a clear cutting area. Make sure that no objects can contact the guide bar nose and chain during cutting, this can cause kickback. To avoid the danger, keep the SAFE-T-TIP® anti-kickback device attached while cutting. Refer to “Precautions Against Kickback” earlier in this manual.

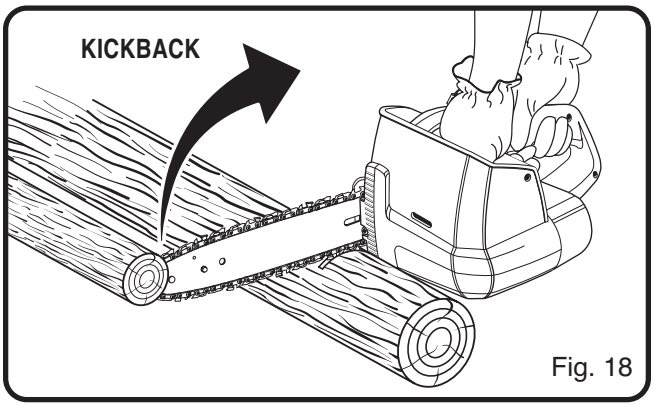


Fig. 18

- When bucking on a slope, always stand on the uphill side of the log. To maintain complete control of the chain saw when cutting through the log, release the cutting pressure near the end of the cut without relaxing your grip on the chain saw handles. Do not let the chain contact the ground. After completing the cut, wait for the saw chain to stop before your move the chain saw. Always stop the motor before moving from tree to tree. *See Figure 19.*
- Sometimes it is impossible to avoid pinching (with just standard cutting techniques) or difficult to predict which way a log will settle when cut. To avoid pinching while cutting, rotate or move the log so that the pinch is eliminated.

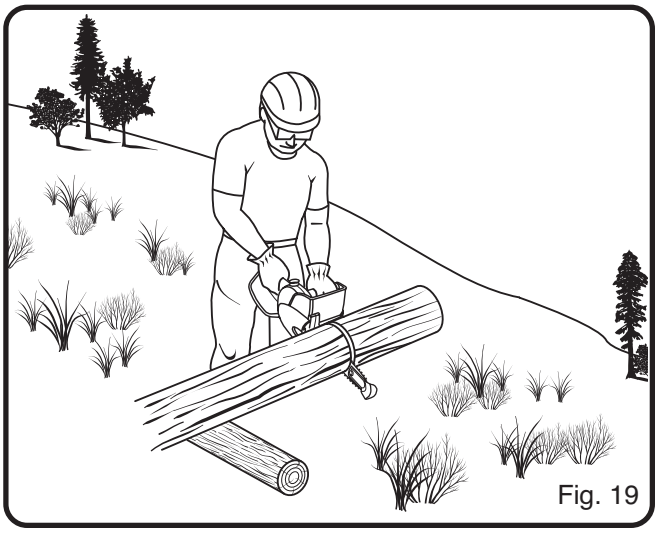


Fig. 19

BUCKING LOGS UNDER STRESS

See Figures 20 and 21.

When the log is supported along its entire length, it should be cut from the top or overbucking.

When the log is supported on one end, cut 1/3 the diameter from the underside or underbucking. Then make the finishing cut by overbucking to meet the first cut.

As the log is being cut, it will tend to bend. The saw can become pinched or hung in the log if you make the first cut deeper than 1/3 of the diameter of the log.

Give special attention to logs under stress to prevent the bar and chain from pinching.

When bucking on a slope, always stand on the uphill side of the log as shown in Figure 19. When “cutting through”, to maintain complete control of the chain saw, release the cutting pressure near the end of the cut without relaxing your grip on the chain saw handles. Do not let the chain contact the ground. After completing the cut, wait for the saw chain to stop before your move the chain saw. Always stop the motor before moving from tree to tree. *See Figure 19.*

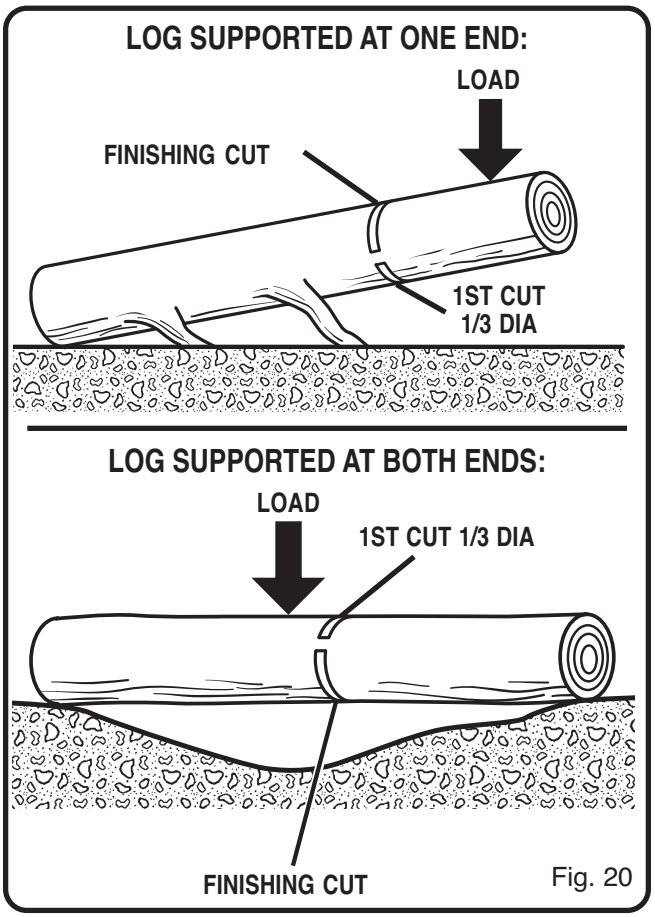


Fig. 20

TYPES OF CUTTING USED

See Figure 21.

OVERBUCKING

Begin on the top side of the log with the bottom of the saw against the log; exert light pressure downward. Note that the saw will tend to pull away from you.

UNDERBUCKING

Begin on the under side of the log with the top of the saw against the log; exert light pressure upward. During underbucking, the saw will tend to push back at you. Be prepared for this reaction and hold the saw firmly to maintain control.

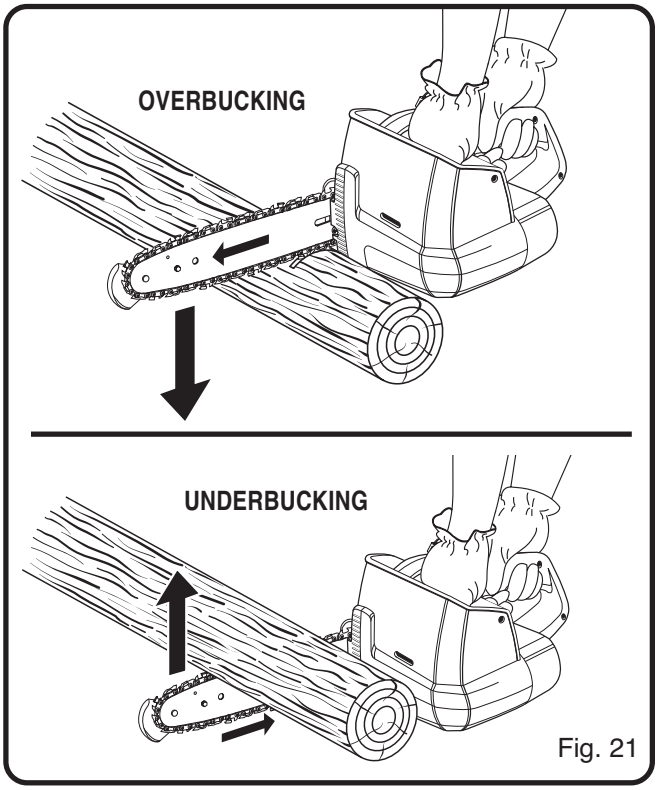


Fig. 21

⚠ WARNING:

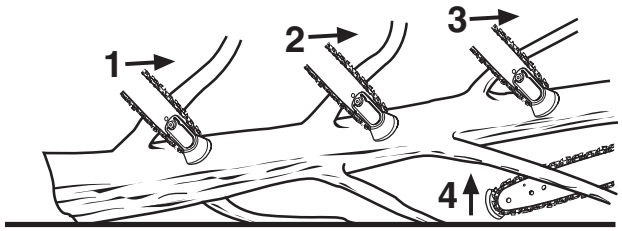
Never climb into a tree to limb or prune. Do not stand on ladders, platforms, a log or in any position which can cause you to lose your balance or control of the saw.

LIMBING

See Figure 22.

Limbing is removing branches from a fallen tree.

- Work slowly, keeping both hands on the chain saw with a firm grip. Always make sure your footing is secure and your weight is distributed evenly on both feet.
- Leave the larger support limbs under the tree to keep the tree off the ground while cutting.
- Limbs should be cut one at a time. Remove the cut limbs from the work area often to help keep the work area clean and safe.
- Branches under tension should be cut from the bottom up to avoid binding the chain saw.
- Keep the tree between you and the chain saw while limbing. Cut from the side of the tree opposite the branch you are cutting.



CUT LIMBS ONE AT A TIME AND LEAVE SUPPORT LIMBS UNDER TREE UNTIL LOG IS CUT

Fig. 22

PRUNING

See Figure 23.

Pruning is trimming limbs from a live tree.

- Work slowly, keeping both hands on the chain saw with a firm grip. Always make sure your footing is secure and your weight is distributed evenly on both feet.
- Do not cut from a ladder, this is extremely dangerous. Leave this operation for professionals.
- Do not cut above chest height as a saw held higher is difficult to control against kickback.
- When pruning trees it is important not to make the finishing cut next to the main limb or trunk until you have cut off the limb further out to reduce the weight. This prevents stripping the bark from the main member.
  1. Underbuck the branch 1/3 through for your first cut.
  2. Your second cut should overbuck to drop the branch off.
  3. Now make your finishing cut smoothly and neatly against the main member so the bark will grow back to seal the wound.

⚠ WARNING:
If the limbs to be pruned are above chest height, hire a professional to perform the pruning.

SPRINGPOLES

See Figure 24.

A springpole is any log, branch, rooted stump, or sapling which is bent under tension by other wood so that it springs back if the wood holding it is cut or removed. On a fallen tree, a rooted stump has a high potential of springing back to the upright position during the bucking cut to separate the log from the stump. Watch out for springpoles, they are dangerous.

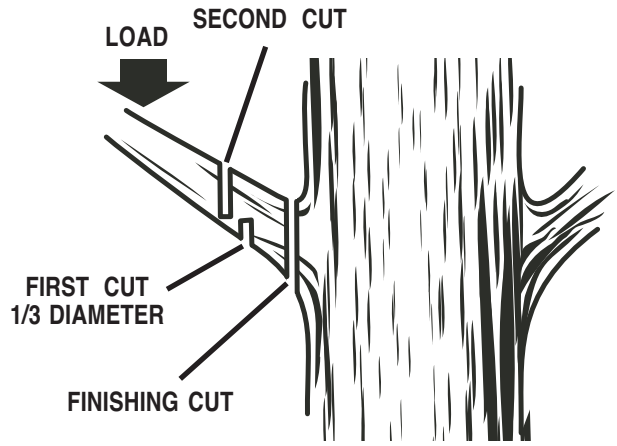


Fig. 23

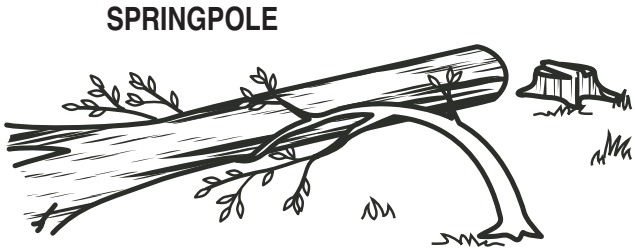


Fig. 24

⚠ WARNING:
Springpoles are dangerous and could strike the operator, causing the operator to lose control of the chain saw. This could result in severe or fatal injury to the operator.

ASSEMBLING BAR AND CHAIN

See Figures 25, 26, 27, 28 and 29.

⚠ CAUTION:
Remove the battery pack from the chain saw and make sure the chain has stopped before you do any work on the saw.

⚠ WARNING:
The safety instructions in this section are to protect the user from serious personal injury.

⚠ CAUTION:
Always wear gloves when handling the bar and chain; these components are sharp and may contain burrs.

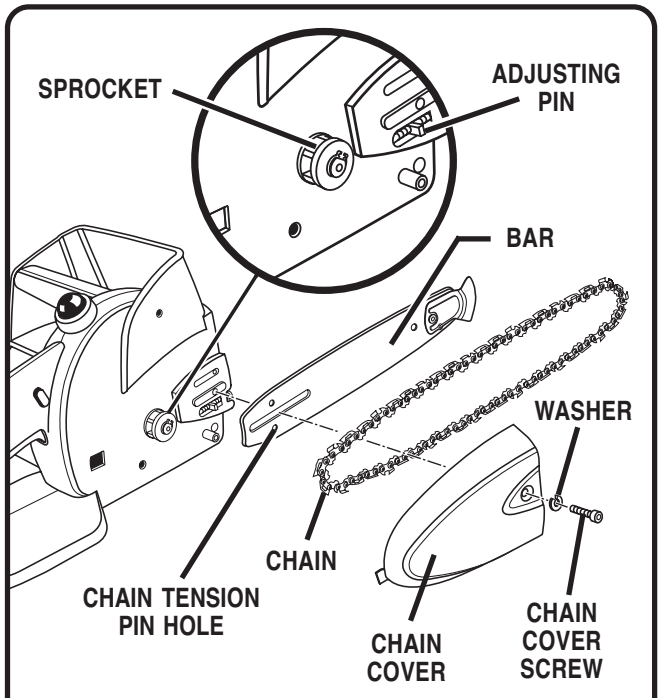


Fig. 25

⚠ WARNING:
Never touch or adjust the chain while the motor is running. The saw chain is very sharp, always wear protective gloves when performing maintenance to the chain.

1. Remove the battery pack before you do any work on the chain saw.
2. Remove the hex key from the storage area and use it to remove the chain cover screw, washer and chain cover from the chain saw.
3. Remove the bar and chain from the mounting surface.
4. Remove the old chain from the bar.
5. Lay out the new saw chain in a loop and straighten any kinks. The cutters should face in the direction of chain rotation. If they face the opposite direction, turn the loop over.
6. Place the chain drive links into the bar groove. Position the chain so there is a loop at the back of the bar. Hold the chain in position on the bar and place the loop around the sprocket of the chain saw. Fit the bar flush against the mounting surface so that the bar stud is in the long slot of the bar.

   NOTE: When placing the bar on the bar stud, assure that the adjusting pin is in the chain tension pin hole.

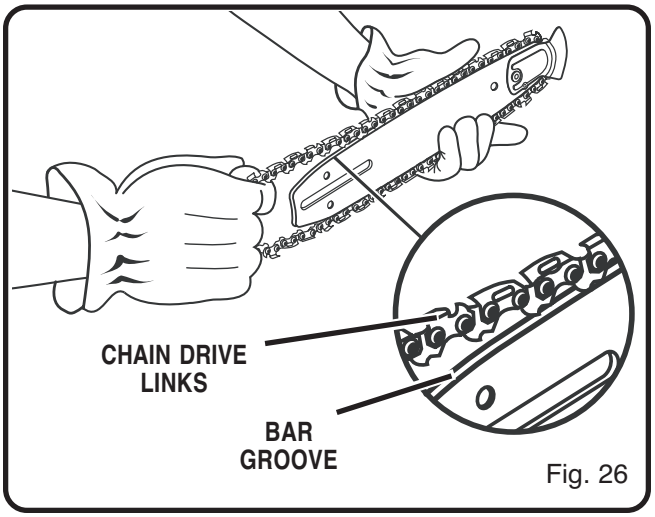


Fig. 26

7. Replace the chain cover, washer and chain cover screw. Tighten the chain cover screw finger tight only. The bar must be free to move for tension adjustment.
8. Remove all the slack from the chain by turning the chain tensioning screw clockwise until the chain seats snugly against the bar with the drive links in the bar groove.
9. Lift the tip of the guide bar up to check for sag. Release the tip of the guide bar and turn the chain tensioning screw 1/2 turn clockwise. Repeat this process until sag does not exist.
10. Hold the tip of the guide bar up and tighten the bar mounting screw securely.
11. Chain is correctly tensioned when there is no sag on the underside of the guide bar, the chain is snug, but it can be turned by hand without binding.

    NOTE: If chain is too tight, it will not rotate. Loosen the chain cover screw slightly and turn tension adjuster 1/4 turn counterclockwise. Lift the tip of the guide bar up and retighten chain cover screw securely. Assure that the chain will rotate without binding.
12. Place the hex key back into the storage area.

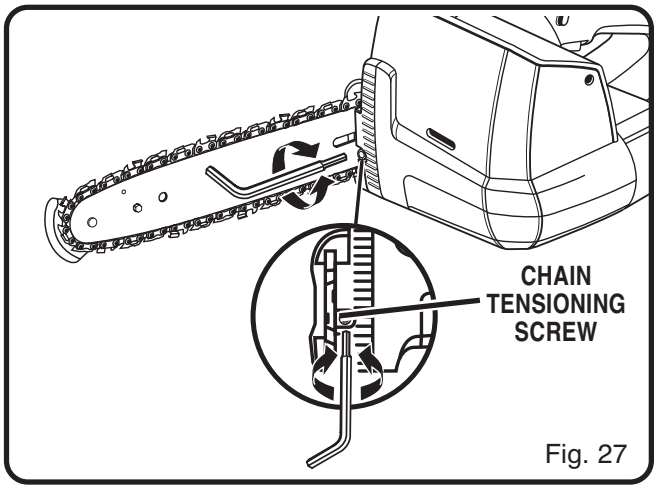


Fig. 27

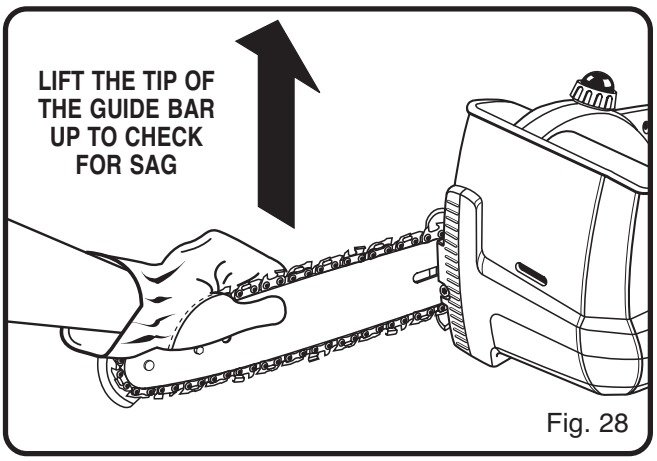


Fig. 28

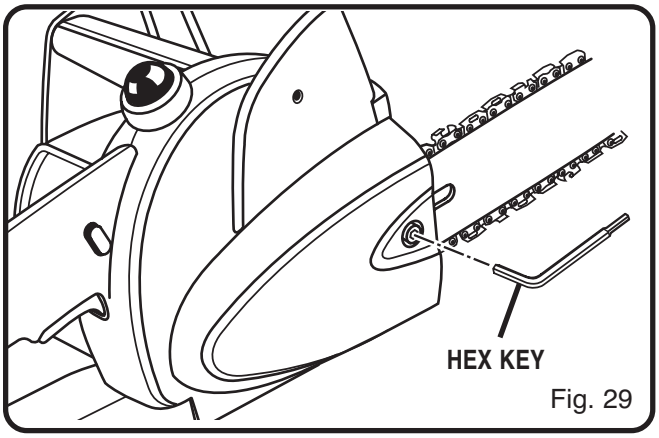


Fig. 29

CHAIN TENSION

See Figures 30 and 31.

1. Stop the engine before setting the chain tension. Make sure the guide bar screw is loosened to finger tight, turn the chain tensioner clockwise to tension the chain. Refer to “Assembling the Bar and Chain” earlier in this manual for additional information.

   A cold chain is correctly tensioned when there is no slack on the underside of the guide bar, the chain is snug, but it can be turned by hand without binding.
2. Chain must be re-tensioned whenever the flats on the drive links hang out of the bar groove.
3. During normal saw operation, the temperature of the chain will increase. The drive links of a correctly tensioned warm chain will hang approximately .050 in. (1.25 mm) out of the bar groove.

NOTE: New chain tends to stretch, check chain tension frequently and tension as required.

⚠ CAUTION:
Chain tensioned while warm, may be too tight upon cooling. Check the “cold tension” before next use.

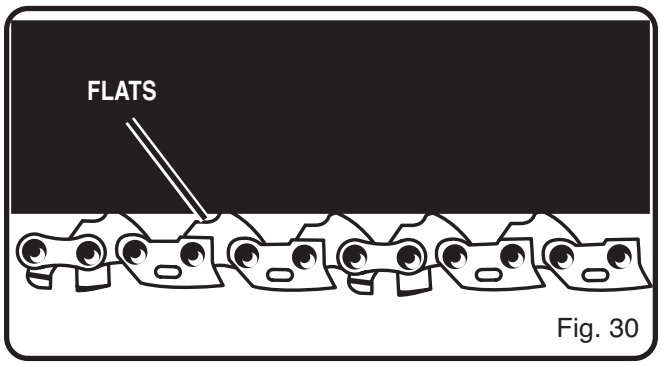


Fig. 30

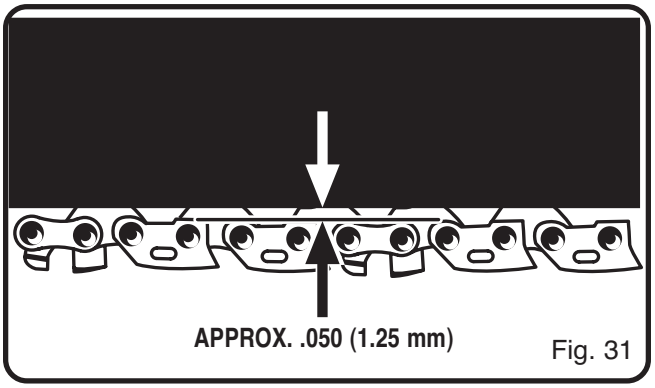


Fig. 31

CHAIN MAINTENANCE

See Figures 32 and 33.

⚠ CAUTION:
Remove the battery pack and make sure the chain has stopped before you do any work on the saw.

Use only low-kickback chain on this saw. This fast-cutting chain will provide kickback reduction when properly maintained.

For smooth and fast cutting, chain needs to be maintained properly. The chain requires sharpening when the wood chips are small and powdery, the chain must be forced through the wood during cutting, or the chain cuts to one side. During maintenance of your chain, consider the following:

- Improper filing angle of the side plate can increase the risk of a severe kickback.
- Raker (depth gauge) clearance.
  - Too low increases the potential for kickback.
  - Not low enough decreases cutting ability.
- If cutter teeth have hit hard objects such as nails and stones, or have been abraded by mud or sand on the wood, have service dealer sharpen chain.

NOTE: Inspect the drive sprocket for wear or damage when replacing the chain. If signs of wear or damage are present in the areas indicated, have the drive sprocket replaced by a Ryobi Service dealer.

HOW TO SHARPEN THE CUTTERS

See Figure 34 and 35.

Be careful to file all cutters to the specified angles and to the same length, as fast cutting can be obtained only when all cutters are uniform.

1. Wear gloves for protection. Properly tension the chain prior to sharpening. Refer to “Chain Tension Section” earlier in this manual. Do all of your filing at the mid-point of the bar.
2. Use A 5/32 in. diameter round file and holder.
3. Keep the file level with the top plate of the tooth. Do not let the file dip or rock.
4. Using light but firm pressure, stroke towards the front corner of the tooth.

   Lift file away from the steel on each return stroke.

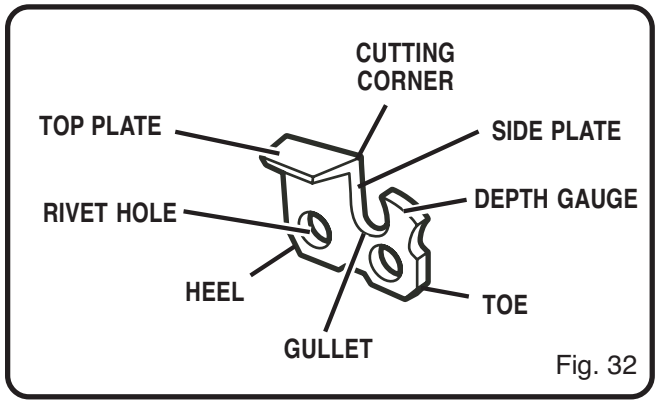


Fig. 32

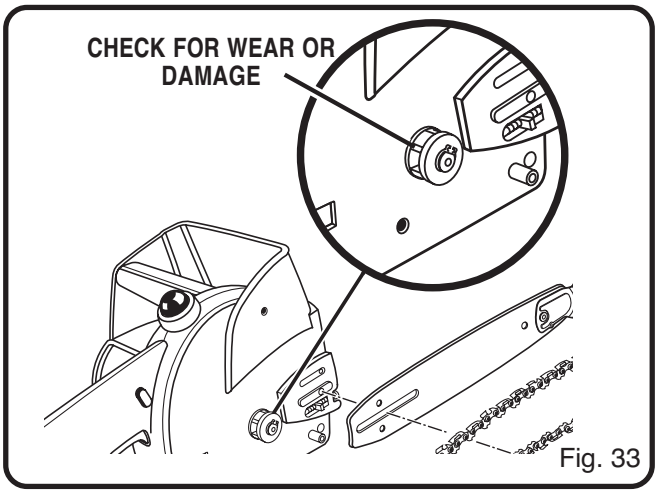


Fig. 33

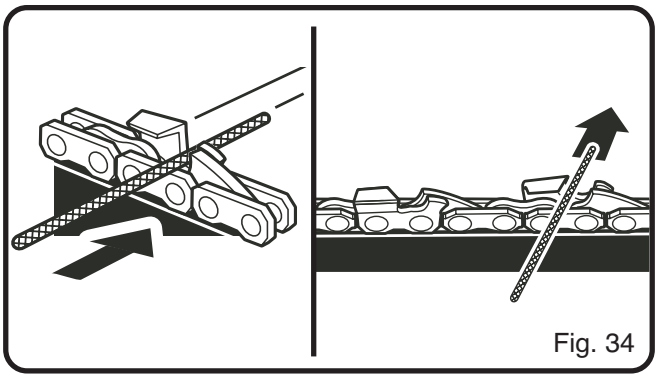


Fig. 34

5. Put a few firm strokes on every tooth. File all left hand cutters in one direction. Then move to the other side and file the right hand cutters in the opposite direction. Occasionally remove filings from the file with a wire brush.

⚠ WARNING:
Improper chain sharpening increases the potential of kickback.

⚠ WARNING:
Failure to replace or repair damaged chain can cause serious injury.

⚠ WARNING:
The saw chain is very sharp, always wear protective gloves when performing maintenance to the chain.

TOP PLATE FILING ANGLE
See Figure 36.

- CORRECT 30° - File holders are marked with guide marks to align file properly to produce correct top plate angle.
- LESS THAN 30° - For Cross Cutting.
- MORE THAN 30° - Feathered Edge Dulls Quickly.

SIDE PLATE ANGLE
See Figure 37.

- CORRECT- 80° Produced automatically if correct diameter file is used in file holder.
- HOOK- "Grabs" and dulls quickly. Increases potential of **KICKBACK**.

  Results from using a file with diameter too small, or file held too low.
- BACKWARD SLOPE- Needs too much feed pressure, causes excessive wear to bar and chain.

  Results from using a file with diameter too large, or file held too high.

DEPTH GAUGE CLEARANCE
See Figure 38.

1. The depth gauge should be maintained at a clearance of .025 in. (0.6 mm). Use a depth gauge tool for checking the depth gauge clearances.
2. Every time the chain is filed, check the depth gauge clearance.

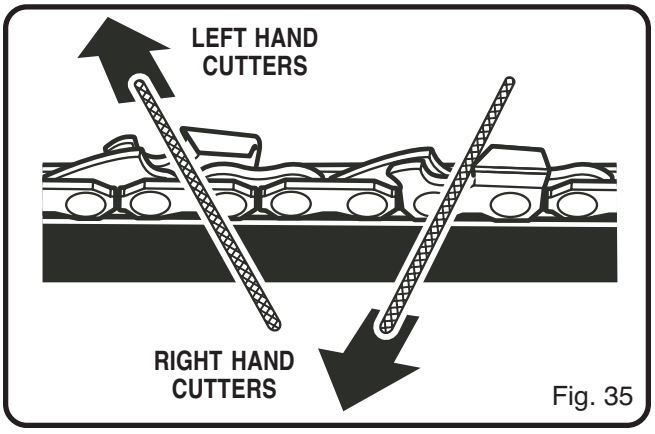


Fig. 35

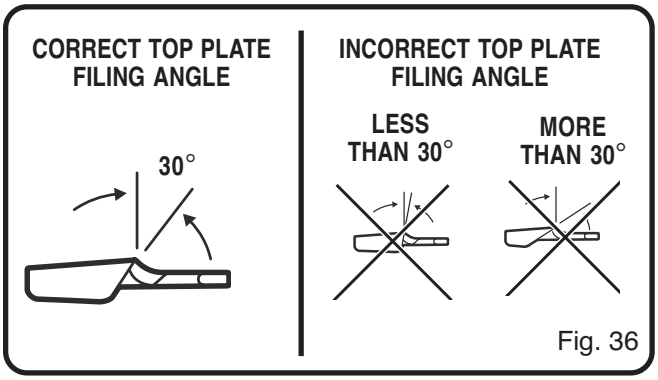


Fig. 36

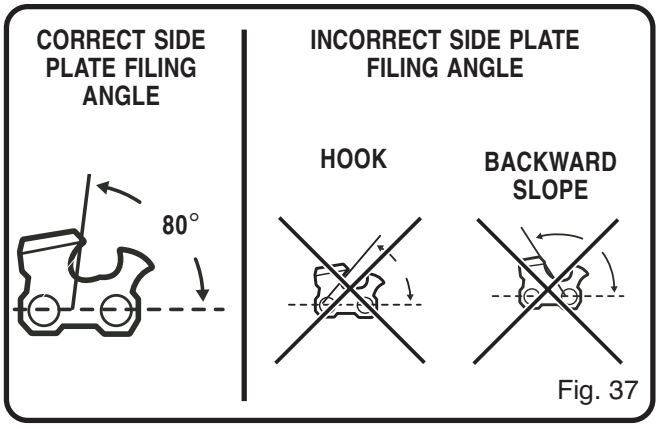


Fig. 37

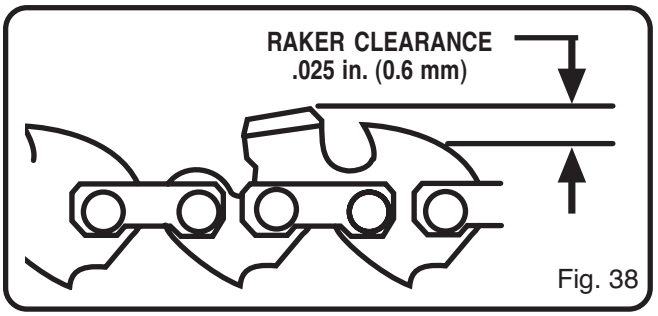


Fig. 38

Use a Flat File and a Depth Gauge Jointer to lower all gauges uniformly. Depth gauge jointers are available in .020 in. to .035 in. (0.5 mm to 0.9 mm). Use a .025 in. (0.6 mm) depth gauge jointer. After lowering each depth gauge, restore original shape by rounding the front. Be careful not to damage adjoining drive links with the edge of the file. *See Figures 39 and 40.*

Depth gauges must be adjusted with the flat file in the same direction the adjoining cutter was filed with the round file. Use care not to contact cutter face with flat file when adjusting depth gauges.

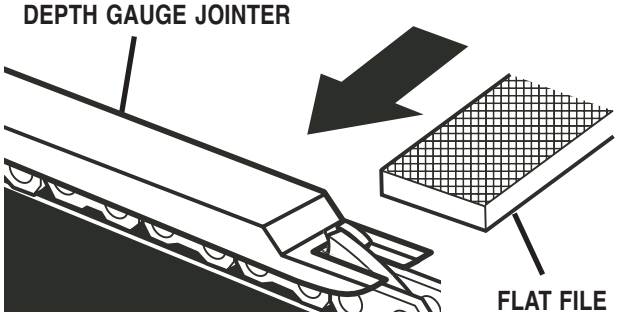


Fig. 39

GUIDE BAR MAINTENANCE

See Figure 41.

When the guide bar shows signs of wear, reverse it on the saw to distribute the wear for maximum bar life. The bar should be cleaned every day of use and checked for wear and damage.

Feathering or burring of the bar rails is a normal process of bar wear. Such faults should be smoothed with a file as soon as they occur.

A bar with any of the following faults should be replaced.

- Wear inside the bar rails which permits the chain to lay over sideways.
- Bent guide bar.
- Cracked or broken rails.
- Spread rails.

In addition, guide bars with a sprocket at their tip must be lubricated weekly with a grease syringe to extend the guide bar life. Using a grease syringe, lubricate weekly in the lubricating hole. *See Figure x.*

Turn the guide bar and check that the lubrication holes and chain groove are free from impurities.

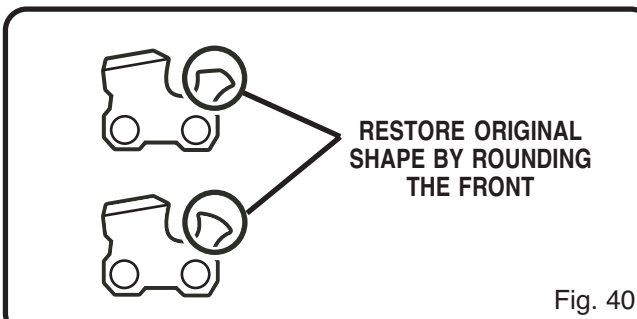


Fig. 40

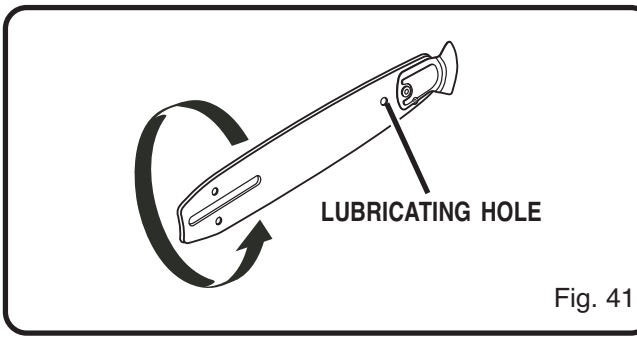


Fig. 41

REVERSING THE GUIDE BAR

See Figures 41, 42, and 43.

1. Remove the SAFE-T-TIP® mounting screw.
2. Remove the SAFE-T-TIP® from the bar.
3. Remove the chain from the bar and turn the bar over.

   NOTE: Bottom of bar should not be on top.
4. Replace the chain on the bar. Refer to “Assembling the Bar and Chain” earlier in this manual for specific information.
5. Replace the SAFE-T-TIP® on the bar nose.

   NOTE: The locking tab fits in the recessed hole in the bar.
6. Tighten the screw with your finger.
7. From the finger-tight position, tighten the screw an additional 3/4 of a turn using a wrench.

⚠ CAUTION:
Remove the battery pack and make sure the chain has stopped before you do any work on the saw.

⚠ WARNING:
Although the guide bar comes with a SAFE-T-TIP® anti-kickback device already installed, you need to check the tightness of the mounting screw before each use.

SAFE-T-TIP® NOSE GUARD MAINTENANCE

See Figures 42 and 43.

Tighten the mounting screw of the nose guard as instructed below. These are specially hardened screws. If the screw cannot be installed tightly, replace both the screw and the SAFE-T-TIP® before further operation. Do not replace with an ordinary screw.

In addition to preventing chain contact with solid objects at the nose of the bar, the SAFE-T-TIP® also helps keep the chain away from abrasive surfaces such as the ground. Keep it on the right hand side of the bar, where it will be between the chain and the ground during flush with ground cutting.

The mounting screw requires a 5/16 in. wrench (or adjustable wrench) to achieve the recommended tightness of 35 to 45 in. lb. (4-5 Nm). A tightness within this range can be achieved by the following method.

1. Tighten the screw with your finger.
2. From the finger-tight position, tighten the screw an additional 3/4 of a turn using a wrench.

MOUNTING SAFE-T-TIP® NOSE GUARD

See Figuress 42 and 43.

1 Mount the SAFE-T-TIP® on the bar nose.

NOTE: The tab fits in the recessed hole in the bar.

2. Tighten the screw with your finger.
3. From the finger-tight position, tighten the screw an additional 3/4 of a turn using a wrench.

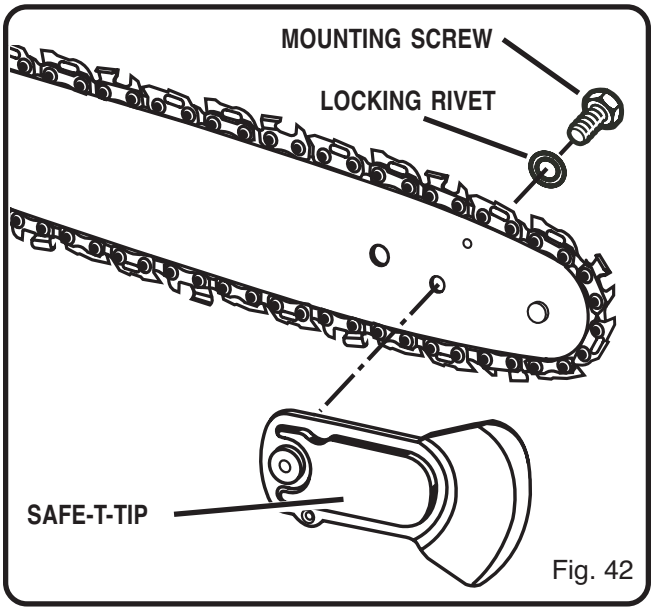


Fig. 42

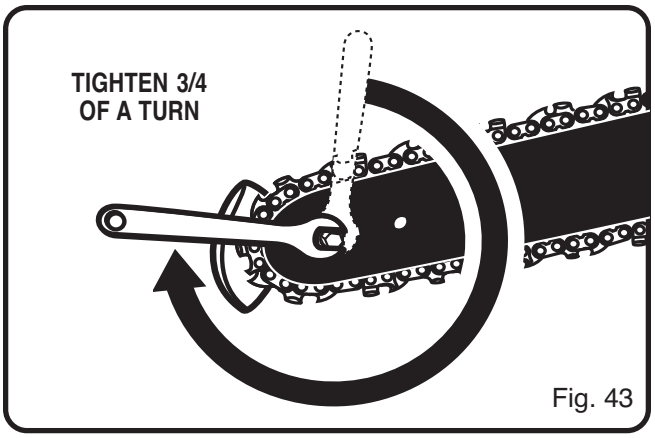


Fig. 43

⚠ WARNING:
When servicing use only identical Ryobi replacement parts. Use of any other parts may create a hazard or cause product damage.

Avoid using solvents when cleaning plastic parts. Most plastics are susceptible to damage from various types of commercial solvents and may be damaged by their use. Use clean cloths to remove dirt, dust, oil, grease, etc.

⚠ WARNING:
Do not at any time let brake fluids, gasoline, petroleum-based products, penetrating oils, etc. come in contact with plastic parts. They contain chemicals that can damage, weaken or destroy plastic.

⚠ WARNING:
Do not attempt to modify this tool or create accessories not recommended for use with this tool. Any such alteration or modification is misuse and could result in a hazardous condition leading to possible serious personal injury.

⚠ WARNING:
Any repairs requiring disassembly should only be performed by a Ryobi Authorized Service dealer. For the repair center nearest you, call **1-800-525-2579.**

TRANSPORTING AND STORING

See Figure 44.

- Do not store or transport the chain saw when it is running. The chain saw should always be idle before storing or transporting.
- Always place the guide bar scabbard on the bar and chain before storing or transporting the chain saw. Use caution to avoid the sharp teeth of the chain.
- Clean the chain saw thoroughly before storing. Store the chain saw indoors, in a dry place that is locked and/or inaccessible to children.
- Keep away from corrosive agents such as garden chemicals and de-icing salts.

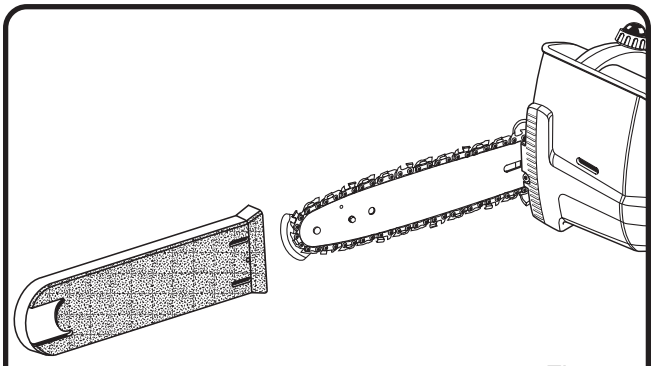


Fig. 44

BATTERIES

The battery pack for your chain saw is equipped with nickel-cadmium rechargeable batteries. Length of service from each charging will depend on the type of work you are doing.

The batteries in this tool have been designed to provide maximum trouble free life. However, like all batteries, they will eventually wear out. **Do not** disassemble battery pack and attempt to replace the batteries. Handling of these batteries, especially when wearing rings and jewelry, could result in a serious burn.

To obtain the longest possible battery life, we suggest the following:

- Store and charge your batteries in a location where the temperature is above 50°F but less than 100°F.
- Never store batteries in a discharged condition. Recharge them immediately after they are discharged.
- All batteries gradually lose their charge. The higher the temperature the quicker they lose their charge. If you store your chain saw for long periods of time without using it, recharge it every month or two. This practice will prolong battery life.

DISPOSAL OF THE EXHAUSTED BATTERY

To preserve natural resources, please recycle or dispose of properly. This product contains a nickel-cadmium battery. Must be disposed of properly. Local, state, or federal laws may prohibit disposal of Nickel-Cadmium batteries in ordinary trash.

Consult your local waste authority for information regarding available recycling and/or disposal options. For more information on battery recycling call **1-800-8BATTERY.**

BATTERY PACK PREPARATION FOR RECYCLING

⚠ WARNING:
Upon removal, cover the battery pack's terminals with heavy duty adhesive tape. Do not attempt to destroy or disassemble battery pack or remove any of its components. Also, never touch both terminals with metal objects and/or body parts as short circuit may result. Keep away from children. Failure to comply with these warnings could result in fire and/or serious injury.

BAR AND CHAIN COMBINATIONS

RECOMMENDED BAR AND CHAIN COMBINATIONS

Bar Part Number - 10 in. (254 mm)	671256002 or 671667002
Chain Part Number	6958301 or 690583002

TROUBLESHOOTING

IF THESE SOLUTIONS DO NOT SOLVE THE PROBLEM CONTACT YOUR AUTHORIZED SERVICE DEALER.

PROBLEM	POSSIBLE CAUSE	SOLUTION
Bar and chain running hot and smoking.	1. Check chain tension for over tight condition 2. Chain oil tank empty.	1. Tension chain. Refer to “Chain Tension” earlier in this manual. 2. Check oil tank.
Motor runs, but chain is not rotating.	1. Chain tension too tight. 2. Check guide bar and chain assembly. 3. Check guide bar and chain for damage.	1. Retension chain, Refer to “Chain Tension” earlier in this manual. 2. Refer to “Assembling the Bar and Chain” earlier in this manual. 3. Inspect guide bar and chain for damage.

NOTES

NOTES

OPERATOR'S MANUAL

18 Volt Cordless Chain Saw

Model No. CS1800

CUSTOMER SERVICE INFORMATION

For parts or service, contact your nearest Ryobi authorized service center. Be sure to provide all relevant information when you call or visit. For the location of the authorized service center nearest you, please call 1-800-525-2579 or visit us online at www.ryobitools.com.

The model number of this tool is found on a plate attached to the buffer/polisher. Please record the serial number in the space provided below. When ordering repair parts, always give the following information:

Model No. CS1800

Serial No. _____

RYOBI TECHNOLOGIES INC.

1428 Pearman Dairy Road Anderson, SC 29625

Post Office Box 1207 Anderson, SC 29622

www.ryobitools.com

1-800-525-2579

983000-353

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